STIC Search Report
EIC 2600

STIC Database Tracking Number: 206012

TO: Jeffrey Smith
Location: TL Lab3 (3019)
Art Unit : 2624
Monday, October 30, 2006

Case Serial Number: 10/677966

From: Virgil O. Tyler(ASRC)
Location: EIC 2600
KNX-8B68
Phone: 571-272-8536

Virgil.Tyler@uspto.gov

Search Notes

Dear Examiner Smith,

Attached are the search results (from commercial databases) for your case.

Tags mark the patent/articles, which might be of interest. After you review all records including tagged and untagged records, if you wish to order the complete text of any record, please submit request(s) directly to the STIC-EIC 2600 Email Box or hand carry the request to the front desk of the respective EIC.

Please call if you have any questions or suggestions. I have enclosed a Search Results Feedback Form to facilitate further comments or suggestions. Please take a few minutes to share with us your feedback.

Thanks

Virgil O. Tyler

Virgil O. Tyler,CLIN Assistant
Technical Information Specialist
ASRC Aerospace Corporation
EIC 2600

EIC2600

Fast & Focused Search Feedback Form (Optional)

The search results generated for your *Fast & Focused* search request are attached.
If you have any questions or comments about the scope or the results of the search, please contact *the EIC Searcher* who conducted the search *or contact*:

Pamela.Reynolds@uspto.gov, EIC2600 Team Leader, 2-3505

Voluntary Results Feedback Form

➢ *I am an examiner in Workgroup:* ☐ *Example: 2611*

➢ *Were you satisfied with the coverage and search strategies of this search?* ☐ YES ☐ NO

Why/Why Not?

➢ *Relevant prior art found; Search results used as follows:*

☐ 102 rejection

☐ 103 rejection

☐ Cited as being of interest.

☐ Helped examiner better understand the invention.

☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

☐ Foreign Patent(s)

☐ Non-Patent Literature (journal articles, conference proceedings, etc.)

➢ *Relevant prior art not found:*

☐ Results verified the lack of relevant prior art (helped determine patentability).

☐ Search results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to STIC-EIC2600, KNX 8B59. Thanks.

```
File   2:INSPEC 1898-2006/Oct W4
         (c) 2006 Institution of Electrical Engineers
File   5:Biosis Previews(R) 1969-2006/Oct W4
         (c) 2006 The Thomson Corporation
File   6:NTIS 1964-2006/Oct W3
         (c) 2006 NTIS, Intl Cpyrght All Rights Res
File   8:Ei Compendex(R) 1970-2006/Oct W3
         (c) 2006 Elsevier Eng.  Info. Inc.
File  34:SciSearch(R) Cited Ref Sci 1990-2006/Oct W4
         (c) 2006 The Thomson Corp
File  35:Dissertation Abs Online 1861-2006/Oct
         (c) 2006 ProQuest Info&Learning
File  65:Inside Conferences 1993-2006/Oct 30
         (c) 2006 BLDSC all rts. reserv.
File  71:ELSEVIER BIOBASE 1994-2006/Oct W4
         (c) 2006 Elsevier B.V.
File  73:EMBASE 1974-2006/Oct 27
         (c) 2006 Elsevier B.V.
File  94:JICST-EPlus 1985-2006/Jul W3
         (c)2006 Japan Science and Tech Corp(JST)
File  95:TEME-Technology & Management 1989-2006/Oct W5
         (c) 2006 FIZ TECHNIK
File  98:General Sci Abs 1984-2006/Oct
         (c) 2006 The HW Wilson Co.
File  99:Wilson Appl. Sci & Tech Abs 1983-2006/Sep
         (c) 2006 The HW Wilson Co.
File 136:BioEngineering Abstracts 1966-2006/Sep
         (c) 2006 CSA.
File 143:Biol. & Agric. Index 1983-2006/Sep
         (c) 2006 The HW Wilson Co
File 144:Pascal 1973-2006/Oct W2
         (c) 2006 INIST/CNRS
File 155:MEDLINE(R) 1950-2006/Oct 27
         (c) format only 2006 Dialog
File 172:EMBASE Alert 2006/Oct 27
         (c) 2006 Elsevier B.V.
File 188:Health Devices Sourcebook 2004
         ECRI (A nonprofit agency)
File 198:Health Devices Alerts(R) 1977-2006/Aug W2
         (c) 2006 ECRI-nonprft agncy
File 239:Mathsci 1940-2006/Dec
         (c) 2006 American Mathematical Society
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 2006 The Thomson Corp
File 583:Gale Group Globalbase(TM) 1986-2002/Dec 13
         (c) 2002 The Gale Group
File 603:Newspaper Abstracts 1984-1988
         (c)2001 ProQuest Info&Learning
File 483:Newspaper Abs Daily 1986-2006/Oct 29
         (c) 2006 ProQuest Info&Learning
File 248:PIRA 1975-2006/Oct W2
         (c) 2006 Pira International

Set     Items   Description
S1    2786599   X()(RAY?? OR RADIATION OR RADIOAGRAPHY)
S2    1227624   CT OR COMPUTED()(TOMOGRAPHY OR RADIOGRAPHY)
S3      76653   CONVOLUTION  (January 1995)
S4    9300715   IMAG? OR FLUOROSCOPIC()IMAG? OR PIXEL? OR PEL OR POINT??
S5         52   AU=(ALLOUCHE, C? OR ALLOUCHE C?)
S6    1653084   FILTER??? OR FOURIER(3N)TRANSFORM??
S7    2091907   NOISE?? OR INTERFERENCE?? OR GLARE?? OR GLARING OR PHANTOM-
```

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             ?? OR REMANENCE??
S8        67023   S1(3N)S2
S9           18   S8(20N)S3
S10          14   RD  (unique items)
S11          13   S10(20N)(S4 OR S6 OR S7)
S12          13   S11 NOT PY>2002
S13           1   S10 NOT S12
S14           0   S13 NOT PY>2002
S15           0   S8 AND S5
S16           0   (S4(3N)(S6 OR S7)) AND S5
S17         614   (S4(3N)(S6 OR S7))(3N)S3
S18           0   S17(3N)S8
S19           4   S17(S)S8
S20           3   S19 NOT S12
S21           1   RD  (unique items)
S22           0   S3 AND S5
```

11/3,K/1 (Item 1 from file: 2)
DIALOG(R)File 2:INSPEC

06027286 INSPEC Abstract Number: A9518-8760K-003, B9510-7510B-032, C9510-7330-032
Title: Positron emission tomography: physical models and reconstruction issues
Author(s): Ollinger, J.M.
Author Affiliation: Inst. for Biomed. Comput., Washington Univ., St. Louis, MO, USA
Conference Title: Proceedings ICIP-94 (Cat. No.94CH35708) Part vol.3 p.543-7 vol.3
Publisher: IEEE Comput. Soc. Press, Los Alamitos, CA, USA
Publication Date: 1994 Country of Publication: USA 3 vol. (liii+992+1064+1050) pp.
ISBN: 0 8186 6952 7
U.S. Copyright Clearance Center Code: 0 8186 6950 0/94/$4.00
Conference Title: Proceedings of 1st International Conference on Image Processing
Conference Sponsor: IEEE Signal Process. Soc
Conference Date: 13-16 Nov. 1994 Conference Location: Austin, TX, USA
Language: English
Subfile: A B C

...Abstract: pharmaceutical. These images can be combined with appropriate physiological models and ancillary measurements to yield **images** of physiological parameters such as perfusion, metabolic rates, receptor characteristics etc. Although **images** are usually reconstructed with the **convolution** -backprojection algorithm used in **X - ray CT** , there are several important differences in the data. Effects such as attenuation, Compton scatter, accidental...

11/3,K/2 (Item 2 from file: 2)
DIALOG(R)File 2:INSPEC

04433461 INSPEC Abstract Number: A89096807, B89058542, C89050727
Title: Information processing for X-ray CT and MRI
Author(s): Yokoyama, T.
Author Affiliation: Syst. Dev. Lab., Hitachi Ltd., Japan
Journal: Information Processing Society of Japan vol.30, no.3 p. 215-24
Publication Date: 1989 Country of Publication: Japan
CODEN: JOSHA4 ISSN: 0447-8053
Language: Japanese
Subfile: A B C

Abstract: Discusses various aspects of **X - ray computed tomography** and magnetic resonance **imaging** , including: NMR computed tomography; half-scan **imaging** ; angio- **imaging** ; **filtered** back-projection; **convolution** ; sampling; FLASH (fast low-angle shot) **imaging** ; FISP (fast **imaging** with steady precession); spiral-scan echo planar **imaging** ; flow **imaging** ; chemical shift imaging; angiography; and segmentation.

11/3,K/3 (Item 3 from file: 2)
DIALOG(R)File 2:INSPEC

04107516 INSPEC Abstract Number: A88050029, B88029973, C88025601
Title: Biomedical image enhancement by means of a fast polynomial transform
Author(s): Ni Jie; Jin Ji-chen
Author Affiliation: Dept. of Radio Eng., Chongging Univ., Sichuan, China
Journal: Proceedings of the SPIE - The International Society for Optical Engineering vol.767, pt.1 p.411-15
Publication Date: 1987 Country of Publication: USA
CODEN: PSISDG ISSN: 0277-786X
Conference Title: Medical Imaging
Conference Sponsor: SPIE
Conference Date: 1-6 Feb. 1987 Conference Location: Newport Beach, CA, USA
Language: English
Subfile: A B C

...Abstract: pictures can be obtained by using Fast Polynomial Transform (FPT) implementation of 2-D circular **convolution** . A hidden modulo arithmetic of FPT with operating length 64 and a new design of simple 2-D Frequency Sampling **Filter** are presented. The **filtering convolution** processing of **X - ray** and **CT** pictures is very helpful in efficiently diagnosing lung cancer and liver tubercular.

11/3,K/4 (Item 4 from file: 2)
DIALOG(R)File 2:INSPEC

02190525 INSPEC Abstract Number: A78042288
Title: Optical inverse radon transform
Author(s): Nishimura, M.; Casasent, D.; Caimi, F.
Author Affiliation: Dept. of Electrical Engng., Carnegie-Mellon Univ., Pittsburgh, PA, USA
Journal: Optics Communications vol.24, no.3 p.276-80
Publication Date: March 1978 Country of Publication: Netherlands
CODEN: OPCOB8 ISSN: 0030-4018
Language: English
Subfile: A

...Abstract: processor that implements the inverse radon transform is described. This operation is of use in **X - ray computed tomography** , transaxial scanning and other **image** construction systems. The optical system outlined uses the **convolution** of two two-dimensional functions to achieve the inverse radon transform by a new implementation...

11/3,K/5 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0007285137 BIOSIS NO.: 199090069616
AN IMPROVEMENT ON THE TWO-DIMENSIONAL CONVOLUTION METHOD OF IMAGE RECONSTRUCTION AND ITS APPLICATION TO SPECT
AUTHOR: SUZUKI S (Reprint); ARAI H
AUTHOR ADDRESS: DEP RADIOL TECH, COLL MED TECHNOL, HOKKAIDO UNIV, KITA-KU, SAPPORO 060, JPN**JAPAN
JOURNAL: Radioisotopes 39 (4): p155-162 1990
ISSN: 0033-8303
DOCUMENT TYPE: Article

RECORD TYPE: Abstract
LANGUAGE: JAPANESE

...ABSTRACT: SPECT) and X-ray CT one-dimensional (1-D) convolution method is used for their **image** reconstruction from projections. The methods makes a 1-D **convolution filtering** on projection data with a 1-D **filter** in the space domain, and backprojects the **filtered** data for reconstruction. **Images** can also be reconstructed by first forming the 2-D backprojection images from projections and...

11/3,K/6 (Item 1 from file: 6)
DIALOG(R)File 6:NTIS

1769769 NTIS Accession Number: DE93015159
Development and application of local 3-D x-ray CT reconstruction software for imaging critical regions in large ceramic turbine rotors
Sivers, E. A. ; Holloway, D. L. ; Ellingson, W. A. ; Ling, J.
Argonne National Lab., IL.
Corp. Source Codes: 001960000; 0448000
Sponsor: Department of Energy, Washington, DC.
Report No.: ANL/MCT/CP-76064; CONF-920799-8
1992. 9p
Languages: English Document Type: Conference proceeding
Journal Announcement: GRAI9403; ERA9401
Review of progress in quantitative nondestructive evaluation (NDE), La Jolla, CA (United States), 19-24 Jul 1992. Sponsored by Department of Energy, Washington, DC.
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
NTIS Prices: PC A02/MF A01

... produces an ''edge-enhanced'' reconstruction and requires only minor modifications of the standard 3-D **X - ray CT** algorithm, is recommended. Since the primary difference between Global and Local CT concerns the design of the **convolution filter** , two versions of a Local CT fitter are discussed here. These two **filters** are used in a Local CT implementation to reconstruct 3D **X - ray CT** data. For comparison, Global CT using the Shepp-Logan variation of the fan-beam convolution...

11/3,K/7 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

03467521 E.I. Monthly No: EI9208097888
Title: Statistical approach to X-ray CT imaging and its applications in image analysis--I: Statistical analysis of X-ray CT imaging.
Author: Lei, Tianhu; Sewchand, Wilfred
Source: IEEE Transactions on Medical Imaging v 11 n 1 Mar 1992 p 53-61
Publication Year: 1992
CODEN: ITMID4 ISSN: 0278-0062
Language: English

Identifiers: **X - RAY CT IMAGING** ; **PIXELS** ; RADON INVERSE FORMULA; CONVOLUTION ALGORITHM

11/3,K/8 (Item 2 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

03048563 E.I. Monthly No: EI9104043143
Title: Linogram reconstruction for magnetic resonance imaging (MRI).
Author: Axel, Leon; Herman, Gabor T.; Roberts, David A.; Dougherty, Lawrence
Corporate Source: Dept of Radiol, Hospital of the Univ of Pennsylvania, Philadelphia, PA, USA
Source: IEEE Transactions on Medical Imaging v 9 n 4 Dec 1990 p 447-449
Publication Year: 1990
CODEN: ITMID4 ISSN: 0278-0062
Language: English

Abstract: Reconstruction of magnetic resonance **images** (MRIs) by backprojection, which commonly uses techniques analogous to those employed for **X - ray computed tomography** , is discussed. The recently developed method of linogram reconstruction, an alternative to conventional convolution/backprojection...

11/3,K/9 (Item 3 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

03022339 E.I. Monthly No: EIM9102-004996
Title: Effect of convolution **kernels on 3-D** X - Ray CT image **quality for characterization of ceramics.**
Author: Gopalan, K.; Hentea, T. I.; Ellingson, W. A.
Corporate Source: Purdue Univ, Hammond, IN, USA
Conference Title: Fourteenth Annual Conference on Composites and Advanced Ceramic Materials
Conference Location: Cocoa Beach, FL, USA Conference Date: 19900114
E.I. Conference No.: 13787
Source: Ceramic Engineering and Science Proceedings v 11 n 9-10 pt 2. Publ by American Ceramic Soc, Westerville, OH, USA. p 1320-1328
Publication Year: 1990
CODEN: CESPDK ISSN: 0196-6219
Language: English

Title: Effect of convolution **kernels on 3-D** X - Ray CT image **quality for characterization of ceramics.**
Abstract: X-ray computed tomographic **imaging** is gaining widespread application for nondestructive evaluation and characterization of advanced structural ceramic materials. Since quality of the **X - ray CT image** depends on the **convolution** kernel used, it is important to choose an appropriate kernel for accurate measurement of parameters...

11/3,K/10 (Item 4 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

01675874 E.I. Monthly No: EIM8408-063798
Title: DIRECT METHOD OF IMAGE RECONSTRUCTION FROM ITS LINE INTEGRALS BY CONE BEAM X-RAYS.
Author: Imiya, Jun; Ogawa, Hidemitsu
Corporate Source: Tokyo Inst of Technology, Dep of Computer Science,

Tokyo, Jpn
Conference Title: Proceedings of the 1984 International Joint Alpine Symposium: Medical Computer Graphics and Image Communications and Clinical Advances in Neuro CT/NMR.
Conference Location: Innsbruck, Austria Conference Date: 19840211
E.I. Conference No.: 04386
Source: Publ by IEEE, New York, NY, USA. Available from IEEE Service Cent (Cat n 84CH2006-5), Piscataway, NJ, USA p 95-101
Publication Year: 1984
ISBN: 0-8186-0524-3
Language: English

Identifiers: **IMAGE** RECONSTRUCTION IN **COMPUTED TOMOGRAPHY** ; **X - RAY** TRANSFORMATION MATHEMATICS; **CONVOLUTION** ; LINE INTEGRAL TRANSFORMATION; **FILTERED** BACKPROJECTION METHOD; CONE BEAM X-RAY TRANSFORM; INVERSION FORMULA FOR **IMAGE** RECONSTRUCTION

11/3,K/11 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

05341415 EMBASE No: 1993109500
Study of the characteristics and performances of a radiotherpay simulator-based computed tomography system (CT)
ETUDE DES CARACTERISTIQUES ET PERFORMANCES D'UN SIMULATEUR-SCANNEUR
Diallo I.; Bouhnik H.; Aubert B.; Chavaudra J.
Service de Physique, Institut Gustave-Roussy, Rue Camille-Desmoulins,94805 Villejuif Cedex France
Bulletin du Cancer/Radiotherapie (BULL. CANCER RADIOTHER.) (France) 1993, 80/1 (27-37)
CODEN: BCRAE ISSN: 0924-4212
DOCUMENT TYPE: Journal; Article
LANGUAGE: FRENCH SUMMARY LANGUAGE: ENGLISH; FRENCH

...unreliability of our simulator gantry, and the low photon rate allowed in screening mode, the **noise** is, according to the **convolution filter** used, in the range of 8-25 times higher than that obtained on the conventional **X - ray CT** scanner. This **noise** , and some characteristics of the detection system (in particular contrast factor and maximum dynamic range...

11/3,K/12 (Item 1 from file: 94)
DIALOG(R)File 94:JICST-EPlus

04599113 JICST ACCESSION NUMBER: 00A0581387 FILE SEGMENT: JICST-E
Observation and analysis of internal structure of rock using X-ray CT.
NAKANO TSUKASA (1); NAKASHIMA YOSHITO (1); NAKAMURA KOICHI (1); IKEDA SUSUMU (2)
(1) Geol. Surv. of Japan, Agency of Ind. Sci. and Technol.; (2) Univ. of Tokyo
Chishitsugaku Zasshi(Journal of the Geological Society of Japan), 2000, VOL.106,NO.5, PAGE.363-378, FIG.11, REF.35
JOURNAL NUMBER: F0528AAM ISSN NO: 0016-7630 CODEN: CHTZA
UNIVERSAL DECIMAL CLASSIFICATION: 552
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

...ABSTRACT: of a material greatly affects the LAC for the photon energy level of the medical **X - ray CT** scanners. **Filtered** back-projection (FBP) method and **convolution** back-projection (CBP) method are applied to the reconstruction of a CT **image** from the obtained X-ray projection data. A suitable choice of a reconstruction filter in...

11/3,K/13 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08464290 PMID: 2345789
[An improvement on the two-dimensional convolution method of image reconstruction and its application to SPECT]
Suzuki S; Arai H
Department of Radiological Techniques, College of Medical Technology, Hokkaido University, Sapporo, Japan.
Radioisotopes (JAPAN) Apr 1990, 39 (4) p155-62, ISSN 0033-8303--Print Journal Code: 20010290R
Publishing Model Print
Document type: Journal Article ; English Abstract
Languages: JAPANESE
Main Citation Owner: NLM
Record type: MEDLINE; Completed

... SPECT) and X-ray CT one-dimensional (1-D) convolution method is used for their **image** reconstruction from projections. The method makes a 1-D **convolution filtering** on projection data with a 1-D **filter** in the space domain, and back projects the **filtered** data for reconstruction. Images can also be reconstructed by first forming the 2-D backprojection..

21/3,K/1 (Item 1 from file: 2)
DIALOG(R)File 2:INSPEC

05165598 INSPEC Abstract Number: A9214-8760J-013
Title: CT fan beam reconstruction with a nonstationary axis of rotation
Author(s): Concepcion, J.A.; Carpinelli, J.D.; Kuo-Petravic, G.; Reisman, S.
Author Affiliation: Siemens Med. Syst., Princeton, NJ, USA
Journal: IEEE Transactions on Medical Imaging vol.11, no.1 p.111-16
Publication Date: March 1992 Country of Publication: USA
CODEN: ITMID4 ISSN: 0278-0062
U.S. Copyright Clearance Center Code: 0278-0062/92/$03.00
Language: English
Subfile: A

...Abstract: a nonstationary axis of rotation would backproject pixel values to incorrect coordinate points. A convolution **filtered** backprojection algorithm has been derived for correcting images that were acquired with a nonstationary axis...

```
File 344:Chinese Patents Abs Jan 1985-2006/Jan
         (c) 2006 European Patent Office
File 347:JAPIO Dec 1976-2006/Jan(Updated 061009)
         (c) 2006 JPO & JAPIO
File 350:Derwent WPIX 1963-2006/UD=200669
         (c) 2006 The Thomson Corporation
File 371:French Patents 1961-2002/BOPI 200209
         (c) 2002 INPI.  All rts. reserv.

Set     Items   Description
S1     148119   X()(RAY?? OR RADIATION OR RADIOAGRAPHY)
S2      22248   CT OR COMPUTED()(TOMOGRAPHY OR RADIOGRAPHY)
S3       5795   CONVOLUTION
S4    2822675   IMAG? OR FLUOROSCOPIC()IMAG? OR PIXEL? OR PEL OR POINT??
S5         14   AU=(ALLOUCHE, C? OR ALLOUCHE C?)
S6     842735   FILTER??? OR FOURIER(3N)TRANSFORM??
S7     574787   NOISE?? OR INTERFERENCE?? OR GLARE?? OR GLARING OR PHANTOM-
              ?? OR REMANENCE
S8       6393   S1(3N)S2
S9          4   S8(20N)S3
S10         7   S8(40N)S3
S11         3   S10 NOT S9
S12         5   S10(20N)(S4 OR S6 OR S7)
S13         2   (S4(3N)(S5 OR S6))(3N)S8
S14         2   S13 NOT S10
S15         4   (S3 OR S8 OR (S4(3N)(S6 OR S7))) AND S5
S16         4   S15 NOT (S10 OR S14)
S17         5   S5 AND IC=G06K?
S18         4   S17 NOT AD=20021031:20061030/PR
S19         3   S18 NOT (S10 OR S14 OR S16)
```

9/3,K/1 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO

06876786 **Image available**
THREE-DIMENTIONAL IMAGING DISPLAY EQUIPMENT

PUB. NO.: 2001-104293 [JP 2001104293 A]
PUBLISHED: April 17, 2001 (20010417)
INVENTOR(s): SAITO MOTOAKI
APPLICANT(s): TERARIKON INC
APPL. NO.: 11-315742 [JP 99315742]
FILED: October 01, 1999 (19991001)

ABSTRACT

... ray CT equipment that prepares and displays three-dimensional images using projection data collected by **x - ray CT** equipment without using two-dimensional imaging data reconstructed by **x - ray CT** equipment.

SOLUTION: **Convolution** data are prepared by **convolution** treatment of projection data using the projection data recorded in portable recording media by **x - ray CT** equipment and information obtained at data collection. Imaging three-dimensional voxel is prepared by back...

9/3,K/2 (Item 2 from file: 347)
DIALOG(R)File 347:JAPIO

03891636 **Image available**
CONVOLUTION METHOD IN **X - RAY CT** DEVICE

PUB. NO.: 04-256736 [JP 4256736 A]
PUBLISHED: September 11, 1992 (19920911)
INVENTOR(s): ISHII SO
APPLICANT(s): HITACHI MEDICAL CORP [420143] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 03-017498 [JP 9117498]
FILED: February 08, 1991 (19910208)
JOURNAL: Section: C, Section No. 1020, Vol. 17, No. 42, Pg. 33, January 26, 1993 (19930126)

CONVOLUTION METHOD IN **X - RAY CT** DEVICE

ABSTRACT

... without increasing an arithmetic time, while using a hardware of the same configuration, in the **convolution** method in an **X - ray CT** device which uses an FFT for a method for performing a filtration for executing out...

9/3,K/3 (Item 3 from file: 347)
DIALOG(R)File 347:JAPIO

01054674 **Image available**
CONVOLUTION OPERATOR

PUB. NO.: 57-204974 [JP 57204974 A]
PUBLISHED: December 15, 1982 (19821215)

INVENTOR(s): TAKAHASHI SHUNJI
APPLICANT(s): HITACHI MEDICAL CORP [420143] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 56-090512 [JP 8190512]
FILED: June 12, 1981 (19810612)
JOURNAL: Section: P, Section No. 182, Vol. 07, No. 60, Pg. 23, March 12, 1983 (19830312)

ABSTRACT

...CONSTITUTION: In a **convolution** operator which operates the product sum between measurement data and correction data for image reconstitution in a **CT** device using transmission **X rays** , ultrasonic waves, or the like, the number of bits of correction data for image reconstitution...

9/3,K/4 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0014528101 - Drawing available
WPI ACC NO: 2004-710052/200469
Related WPI Acc No: 2003-222237; 2003-843515; 2004-487636; 2004-532899; 2004-831780; 2005-521068; 2005-810822; 2006-163209
XRPX Acc No: N2004-563062

Image reconstruction method for X - ray computed tomography **, involves reconstructing exact image of object scanned in spiral fashion with variable pitch, using** convolution **-based filtered back projection algorithm**

Patent Assignee: UNIV CENT FLORIDA (UYFL-N); UNIV CENT FLORIDA RES FOUND INC (UYFL-N)
Inventor: KATSEVICH A

Patent Family (5 patents, 105 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
WO 2004084137	A2	20040930	WO 2003US41114	A	20031224	200469	B
AU 2003304013	A1	20041011	AU 2003304013	A	20031224	200504	E
EP 1605825	A2	20051221	EP 2003816404	A	20031224	200601	E
			WO 2003US41114	A	20031224		
JP 2006513812	W	20060427	WO 2003US41114	A	20031224	200628	E
			JP 2005513580	A	20031224		
AU 2003304013	A8	20051103	AU 2003304013	A	20031224	200629	E

Priority Applications (no., kind, date): US 2003728136 A 20031204; WO 2003US9909 A 20030401; US 2003389534 A 20030314; US 2003389090 A 20030314; WO 2003US38375 A 20031204

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
WO 2004084137	A2	EN	38	12	

National Designated States,Original: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
Regional Designated States,Original: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

AU 2003304013	A1	EN	Based on OPI patent WO 2004084137
EP 1605825	A2	EN	PCT Application WO 2003US41114 Based on OPI patent WO 2004084137

Regional Designated States,Original: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

JP 2006513812	W	JA	23	PCT Application WO 2003US41114 Based on OPI patent WO 2004084137
AU 2003304013	A8	EN		Based on OPI patent WO 2004084137

Image reconstruction method for X - ray computed tomography **, involves reconstructing exact image of object scanned in spiral fashion with variable pitch, using** convolution **-based filtered back projection algorithm**

11/3,K/1 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO

05572649 **Image available**
IMAGE RECONSTRUCTION PROCESSOR

PUB. NO.: 09-187449 [JP 9187449 A]
PUBLISHED: July 22, 1997 (19970722)
INVENTOR(s): TAGUCHI KATSUYUKI
KOBAYASHI TADAHARU
APPLICANT(s): TOSHIBA CORP [000307] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 08-001015 [JP 961015]
FILED: January 08, 1996 (19960108)

ABSTRACT

...SOLUTION: A reconstruction processing section 12 of an **X - ray CT** apparatus is provided with a reconstruction processing control part 21 for calculating data selection, centering...

... the total control of the three-dimensional reconstruction processing. A projection data collected undergoes a **convolution** processing by a convolution computing part 22, and a convolution data C(sub onv) obtained ...

11/3,K/2 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0015269905 - Drawing available
WPI ACC NO: 2005-620004/200564
XRPX Acc No: N2005-508816
Image reconstructing method and x-ray CT device
Patent Assignee: GE MED SYS GLOBAL TECH CO LLC (GENE)
Inventor: DING W; WEI T; YAN X
Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
CN 1614636	A	20050511	CN 200310120365	A	20031106	200564 B

Priority Applications (no., kind, date): CN 200310120365 A 20031106

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
CN 1614636	A	ZH		1	

...includes convoluting projection data for having convolution projecting data, picking up high pass component from **convolution** projecting data, picking up edge information and removing edge information from high pass component for...
...obtaining corrected projection data and carrying out backward projection for the corrected projection data. The **X ray CT** unit for realizing the method is also provided.

11/3,K/3 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0010749700 - Drawing available
WPI ACC NO: 2001-362858/
XRPX Acc No: N2001-264540

Three-dimensional image display device for computer tomography apparatus, has mapping unit mapping three-dimensional voxel value to three-dimensional table for processing voxel three dimension value alone

Patent Assignee: TERALICON INC (TERA-N)
Inventor: SAITO M

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
JP 2001104293	A	20010417	JP 1999315742	A	19991001	200138 B

Priority Applications (no., kind, date): JP 1999315742 A 19991001

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
JP 2001104293	A	JA	11	9	

Alerting Abstract DESCRIPTION - A **x - ray - CT** apparatus has movable type recording medium to record and acquire information at the time of... ...preprocessing of the projection data of examined object at the time of data collection for **convolution** of the protection data. Three-dimensional voxel reconfiguration area setting unit (73) designates the reconfiguration

14/3,K/1 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO

08412284 **Image available**
IMAGE PROCESSOR

PUB. NO.: 2005-160544 [JP 2005160544 A]
PUBLISHED: June 23, 2005 (20050623)
INVENTOR(s): TOYOSHIMA NAOKO
OKUMURA YOSHIKAZU
APPLICANT(s): TOSHIBA CORP
TOSHIBA MEDICAL SYSTEMS CORP
APPL. NO.: 2003-400083 [JP 2003400083]
FILED: November 28, 2003 (20031128)

ABSTRACT

PROBLEM TO BE SOLVED: To improve the quality of an **X - ray CT image** by **filtering** the **image** with characteristics according to scanning conditions and image reconstruction conditions as well as edge intensity...

... edge intensity calculating section 120 calculating an edge intensity in a local area of the **X - ray CT image** , a **filter** element calculating section 123 determining filter characteristics related to a smoothing level for every local area, a Gaussian filtering section 122 filtering the **X - ray CT image** according to the **filter** characteristics determined for every local area, and a storage section 118 storing the correspondence between...

14/3,K/2 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0013716793 - Drawing available
WPI ACC NO: 2003-814488/200377
XRPX Acc No: N2003-651882
CT **or** X - ray **medical** image filtering **method in which** image **integral SNRs are calculated and compared with calculated limit SNR values while carrying out iterative filtering and, if necessary, changing the filter dose**
Patent Assignee: KALTSCHMIDT R (KALT-I); SIEMENS AG (SIEI)
Inventor: KALTSCHMIDT R
Patent Family (2 patents, 2 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
DE 10214114	A1	20031023	DE 10214114	A	20020328	200377	B
US 20030228065	A1	20031211	US 2003401615	A	20030328	200382	E

Priority Applications (no., kind, date): DE 10214114 A 20020328

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
DE 10214114	A1	DE	12	3	

CT **or** X - ray **medical** image filtering **method in which** image **integral SNRs are calculated and compared with calculated limit SNR values while carrying out iterative**...

16/3,K/1 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO

08244536 **Image available**
METHOD AND DEVICE FOR ENHANCING IMAGE CONTRAST

PUB. NO.: 2004-357296 [JP 2004357296 A]
PUBLISHED: December 16, 2004 (20041216)
INVENTOR(s): **ALLOUCHE CYRIL**
APPLICANT(s): GE MEDICAL SYSTEMS GLOBAL TECHNOLOGY CO LLC
APPL. NO.: 2004-155515 [JP 2004155515]
FILED: May 26, 2004 (20040526)
PRIORITY: 03 200350179 [FR 200350179], FR (France), May 27, 2003 (20030527)

INVENTOR(s): **ALLOUCHE CYRIL**

ABSTRACT
...to each dot of the image. Using the detecting map, the effect of a mean **filter** applied to the **image** to be processed is weighted locally.

16/3,K/2 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0014685539 - Drawing available
WPI ACC NO: 2005-033127/
XRPX Acc No: N2005-028985
Image contrast enhancing method for fluoroscopic apparatus e.g. scanner, involves producing detection card to reveal movements in spatial zone, between two dates, for balancing filter effect applied to one of two acquired images
Patent Assignee: GE MEDICAL SYSTEMS GLOBAL TECHNOLOGY CO (GENE)
Inventor: **ALLOUCHE C**
Patent Family (3 patents, 3 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
FR 2855638	A1	20041203	FR 200350179	A	20030527	200504	B
DE 102004026355	A1	20041216	DE 102004026355	A	20040526	200504	E
JP 2004357296	A	20041216	JP 2004155515	A	20040526	200504	E

Priority Applications (no., kind, date): FR 200350179 A 20030527

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
FR 2855638	A1	FR	21	3	
JP 2004357296	A	JA	16		

Inventor: **ALLOUCHE C**

Alerting Abstract ...image related to the image (It). The card is used to balance an effect of **filter** applied to the **image** (It)....ADVANTAGE - The detection card producing the processed image is used to balance the effect of **filter** applied to the **image** , thus reducing fluoroscopic **noise** in the **image** acquired by a fluoroscopic apparatus, and enhancing the contrast of the image...

Original Publication Data by Authority

Inventor name & address:
Allouche, Cyril, Montfort l'Amaury, FR ...

... **ALLOUCHE C ...**

... **ALLOUCHE CYRIL**

16/3,K/3 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0014244028 - Drawing available
WPI ACC NO: 2004-430073/
XRPX Acc No: N2004-339974
Space-time filtering method in radiography used in medical diagnosis, involves performing weighting on coefficients of respective convolution **cores as function of coefficient calculated based on** noise **statistic for** pixel **value**
Patent Assignee: ALLOUCHE C (ALLO-I); GE MEDICAL SYSTEMS GLOBAL TECHNOLOGY CO (GENE)
Inventor: **ALLOUCHE C**
Patent Family (3 patents, 3 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
US 20040086194	A1	20040506	US 2003677966	A	20031002	200440	B
DE 10350697	A1	20040519	DE 10350697	A	20031030	200440	E
FR 2846830	A1	20040507	FR 200213727	A	20021031	200440	E

Priority Applications (no., kind, date): FR 200213727 A 20021031

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
US 20040086194	A1	EN	11	5	

...**filtering method in radiography used in medical diagnosis, involves performing weighting on coefficients of respective** convolution **cores as function of coefficient calculated based on** noise **statistic for** pixel **value**
Inventor: **ALLOUCHE C**

Alerting Abstract ...NOVELTY - A coefficient (G) is calculated based on difference between the value of the **pixel** to be **filtered** and neighborhood **pixels** and the **noise** statistic (104) for value of the **pixel** to be **filtered** . The weighting is performed on coefficients of respective **convolution** cores (105) as function of the calculated coefficient, for each pixel of respective images....space-time **convolution** filer;scanner;space-time filtering program;computer program product for space-time filtering;article of...

...USE - For performing space-time filtering in radiography used in medical diagnosis, for removing **noise** in **fluoroscopic images** .

Original Publication Data by Authority

Inventor name & address:
Allouche, Cyril, Montfort L'Amaury, FR ...

... **ALLOUCHE C** ...

... **Allouche, Cyril**
Original Abstracts:
...To reduce the fluoroscopic **noise** in an **image** I acquired at a date t, the pixels of this image are paired with the...

...date t-1. For a pixel with coordinates (x,y) of the image I, a **convolution** is done with a core U equivalent to a low-pass filter whose coefficients have...

...x,y) in the image I. For the pixel paired in the image Iprime, a **convolution** is done with the core U whose coefficients have been modified as a function of...

...Iprime. The result of the two convolutions is associated linearly in order to obtain a **filtered** value for the **pixel** with coordinates (x,y). These operations are repeated for each pixel of the image I.
Claims:
...first image, a weighting is performed on the coefficients U(k,l) of a first **convolution** core with a dimension D, equivalent to a low-pass filter, as a function of...

...first image, and k and l are indices used to explore the coefficients of the **convolution** core, a second **convolution** core with coefficients Up(k,l) being thus obtained;b. for each pixel with coordinates...

...first image, a weighting is performed on the coefficients U(k,l) of the first **convolution** core as a function of the coefficient G which is a function of the difference...

...the intensity of the pixel with coordinates (x,y) of a second image, a third **convolution** core with coefficients Upprime(k,l) being thus obtained; andc. the filtered value of...

16/3,K/4 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0014179104 - Drawing available
WPI ACC NO: 2004-364369/
XRPX Acc No: N2004-291456
Fluoroscopic noise determination method during radiography examination, involves performing iterative process on all sub-groups defined in dynamic range, and regression process on dots, to determine noise function coefficients
Patent Assignee: ALLOUCHE C (ALLO-I); GE MEDICAL SYSTEMS GLOBAL TECHNOLOGY CO (GENE)
Inventor: **ALLOUCHE C**
Patent Family (3 patents, 3 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
US 20040081344	A1	20040429	US 2003676200	A	20031001	200434	B
DE 10350319	A1	20040519	DE 10350319	A	20031028	200434	E
FR 2846504	A1	20040430	FR 200213566	A	20021029	200434	E

Priority Applications (no., kind, date): FR 200213566 A 20021029

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
US 20040081344	A1	EN	11	3	

Inventor: **ALLOUCHE C**

Alerting Abstract ...USE - For determining **fluoroscopic** noise **in** images acquired in time-based sequences during radiography examination...

...ADVANTAGE - Reduces **the** noise in **radiography** images, thus improves the readability of image...

Original Publication Data by Authority

Inventor name & address:
Allouche, Cyril, Montfort L'Amaury, FR ...

... **ALLOUCHE C** ...

... **Allouche, Cyril**

19/3,K/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0012911483 - Drawing available
WPI ACC NO: 2002-417347/200244
XRPX Acc No: N2002-328454
Image processing method for magnetic resonance imaging apparatus, involves processing next image using tag equations determined for current image
Patent Assignee: ALLOUCHE C (ALLO-I); KONINK PHILIPS ELECTRONICS NV (PHIG); PHILIPS GLOEILAMPENFAB NV (PHIG)
Inventor: **ALLOUCHE C**
Patent Family (6 patents, 22 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
WO 2002037416	A2	20020510	WO 2001EP12405	A	20011024	200244	B
US 20020122577	A1	20020905	US 200122398	A	20011130	200260	E
EP 1334467	A2	20030813	EP 2001992984	A	20011024	200355	E
			WO 2001EP12405	A	20011024		
JP 2004512883	W	20040430	WO 2001EP12405	A	20011024	200430	E
			JP 2002540088	A	20011024		
US 6934407	B2	20050823	US 200122398	A	20011030	200556	E
JP 3751591	B2	20060301	WO 2001EP12405	A	20011024	200617	E
			JP 2002540088	A	20011024		

Priority Applications (no., kind, date): EP 2000403028 A 20001031

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
WO 2002037416	A2	EN	17	4	
National Designated States,Original: JP					
Regional Designated States,Original: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR					
EP 1334467	A2	EN			PCT Application WO 2001EP12405 Based on OPI patent WO 2002037416
Regional Designated States,Original: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR					
JP 2004512883	W	JA	33		PCT Application WO 2001EP12405 Based on OPI patent WO 2002037416
JP 3751591	B2	JA	12		PCT Application WO 2001EP12405 Previously issued patent JP 2004512883 Based on OPI patent WO 2002037416

Inventor: **ALLOUCHE C**

Class Codes
...International Classification (Main): **G06K-009/00**

Original Publication Data by Authority

Inventor name & address:
ALLOUCHE, Cyril ...

... Allouche, Cyril ...

... Allouche, Cyril ...

... ALLOUCHE, Cyril

19/3,K/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0012739959 - Drawing available
WPI ACC NO: 2002-592661/200264
XRPX Acc No: N2002-470313
Method for following deformation of linear structure on organ deforming in time, comprises calculation of a mathematical expression for deformation of organ from marker points on two images
Patent Assignee: ALLOUCHE C (ALLO-I); KONINK PHILIPS ELECTRONICS NV (PHIG); PHILIPS GLOEILAMPENFAB NV (PHIG)
Inventor: **ALLOUCHE C**
Patent Family (4 patents, 28 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
EP 1227441	A1	20020731	EP 200275217	A	20020118	200264	B
FR 2819919	A1	20020726	FR 2001883	A	20010123	200264	E
US 20020146158	A1	20021010	US 200255389	A	20020123	200269	E
JP 2002282237	A	20021002	JP 200213443	A	20020122	200279	E

Priority Applications (no., kind, date): FR 2001883 A 20010123

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
EP 1227441	A1	FR	26	7	
Regional Designated States,Original: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
JP 2002282237	A	JA	9		

Inventor: **ALLOUCHE C**

Class Codes
...International Classification (Main): **G06K-009/00**

Original Publication Data by Authority

Inventor name & address:
Allouche, Cyril ...

... **ALLOUCHE C ...**

... **ALLOUCHE CYRIL ...**

... **Allouche, Cyril**

19/3,K/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

0012716335 - Drawing available
WPI ACC NO: 2002-568110/
XRPX Acc No: N2002-449755
Magnetic resonance image processing includes monitoring movement of marking points between images, to determine movement of human organ
Patent Assignee: ALLOUCHE C (ALLO-I); KONINK PHILIPS ELECTRONICS NV (PHIG); PHILIPS GLOEILAMPENFAB NV (PHIG)

Inventor: **ALLOUCHE C**
Patent Family (3 patents, 28 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
EP 1225545	A1	20020724	EP 200275218	A	20020118	200261 B
JP 2002282236	A	20021002	JP 200213442	A	20020122	200279 E
US 20020176637	A1	20021128	US 200255360	A	20020123	200281 E

Priority Applications (no., kind, date): FR 2001881 A 20010123

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
EP 1225545	A1	FR	14	6	

Regional Designated States,Original: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

JP 2002282236	A	JA	9		

Inventor: **ALLOUCHE C**

Class Codes
...International Classification (Main): **G06K-009/36**

Original Publication Data by Authority

Inventor name & address:
Allouche, Cyril ...

... **ALLOUCHE CYRIL ...**

... **Allouche, Cyril**

File 348:EUROPEAN PATENTS 1978-2006/ 200643
(c) 2006 European Patent Office
File 349:PCT FULLTEXT 1979-2006/UB=20061026UT=20061019
(c) 2006 WIPO/Thomson

Set	Items	Description
S1	94262	X()(RAY?? OR RADIATION OR RADIOAGRAPHY)
S2	81322	CT OR COMPUTED()(TOMOGRAPHY OR RADIOGRAPHY)
S3	12824	CONVOLUTION
S4	1335233	IMAG? OR FLUOROSCOPIC()IMAG? OR PIXEL? OR PEL OR POINT??
S5	6	AU=(ALLOUCHE, C? OR ALLOUCHE C?)
S6	520558	FILTER??? OR FOURIER(3N)TRANSFORM??
S7	336973	NOISE?? OR INTERFERENCE?? OR GLARE?? OR GLARING OR PHANTOM-?? OR REMANENCE
S8	39	(S1 OR S2)(3N)S3
S9	21	S8(20N)(S4 OR S6 OR S7)
S10	19	S9 NOT AD=20021031:20061030/PR
S11	0	S10 AND IC=G06K?
S12	14	S9 NOT (POLYMER? OR CRYSTAL?)
S13	0	S14(40N)WEIGHT???
S14	4	S12(30N)WEIGHT???
S15	1	S5 AND CONVOLUTION

14/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00480284
Apparatuses and methods for processing of data such as colour images
Gerate und Verfahren zur Verarbeitung von Daten, wie zum Beispiel Farbbildern
Appareils et methodes pour le traitement de donnees, telles que les images en couleurs
PATENT ASSIGNEE:
SCITEX CORPORATION LTD., (861613), 7 Hamada Street, Herzliya 46103, (IL), (applicant designated states:
AT;BE;CH;DE;DK;ES;FR;GB;GR;IT;LI;LU;NL;SE)
INVENTOR:
Spiegel, Ehud, 10 Mordei Hagetaot Street, Rehovot, (IL)
Broudo, Moshe, 38 Kdoshei Kahir Street, Holon, (IL)
Lavie, Reuven, 2 Hayarden Street, Herzlia, (IL)
Bresler, Yoav, 24 Refidim Street, Tel Aviv, (IL)
Pluda, Yavoc, 30 Sagi Street, Alfei-Menashe, (IL)
LEGAL REPRESENTATIVE:
Hillier, Peter (47812), Reginald W. Barker & Co., Chancery House, 53-64, Chancery Lane, London, WC2A 1QU, (GB)
PATENT (CC, No, Kind, Date): EP 449407 A2 911002 (Basic)
EP 449407 A3 931006
EP 449407 B1 970409
APPLICATION (CC, No, Date): EP 91300905 910204;
PRIORITY (CC, No, Date): IL 93274 900205; IL 93493 900222; IL 96816 901227; IL 96829 901230; IL 96957 910115; IL 96955 910115
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; SE
INTERNATIONAL PATENT CLASS (V7): H04N-001/46;
ABSTRACT WORD COUNT: 145

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	3984
CLAIMS B	(English)	EPAB97	1174
CLAIMS B	(German)	EPAB97	1274
CLAIMS B	(French)	EPAB97	1404
SPEC A	(English)	EPABF1	61203
SPEC B	(English)	EPAB97	39504
Total word count - document A			65192
Total word count - document B			43356
Total word count - documents A + B			108548

...SPECIFICATION is 3:1, three convolution operations are performed on the same five columns of CT **pixels** , corresponding to the three output **pixels** "superimposed" upon the central **pixel** of the middle column of **CT pixels** . Each **convolution** comprises the process of adding 5 column convolutions stored in SIPO 190, each **weighted** by an appropriate column coefficient arriving from coefficient table 216. Typically, the three sets of...

...SPECIFICATION is 3:1, three convolution operations are performed on the same five columns of CT **pixels** , corresponding to the three output **pixels** "superimposed" upon the central **pixel** of the middle column of **CT pixels** . Each **convolution** comprises the process of adding 5 column convolutions stored in SIPO 190, each **weighted** by an appropriate column coefficient arriving from coefficient table 216. Typically, the three

sets of...

14/3,K/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00436614
Helical scan computed tomography
Spiralabtastrechnertomographie
Tomographie a balayage spirale par calculateur
PATENT ASSIGNEE:
GENERAL ELECTRIC COMPANY, (203903), 1 River Road, Schenectady, NY 12345, (US), (Proprietor designated states: all)
INVENTOR:
Crawford, Carl Ross, 2557 North Lake Drive, Milwaukee, Wisconsin 53211, (US)
King, Kevin Franklin, 15651 West Ridge Road, New Berlin, Wisconsin 53151, (US)
LEGAL REPRESENTATIVE:
Szary, Anne Catherine, Dr. et al (76781), London Patent Operation, GE International, Inc., Essex House, 12-13 Essex Street, London WC2R 3AA, (GB)
PATENT (CC, No, Kind, Date): EP 430549 A2 910605 (Basic)
EP 430549 A3 920520
EP 430549 B1 020306
APPLICATION (CC, No, Date): EP 90312638 901121;
PRIORITY (CC, No, Date): US 440530 891122
DESIGNATED STATES: DE; FR; GB; NL
INTERNATIONAL PATENT CLASS (V7): G06T-011/00
ABSTRACT WORD COUNT: 110

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200210	755
CLAIMS B	(German)	200210	684
CLAIMS B	(French)	200210	886
SPEC B	(English)	200210	4286
Total word count - document A			0
Total word count - document B			6611
Total word count - documents A + B			6611

...SPECIFICATION degree) apart. This method of reconstructing a tomographic image is termed "half scan" reconstruction. The **weighting** and reconstruction of **images** from a half scan data set are discussed in detail in "Optimal Short Scan **Convolution** Reconstruction for Fanbeam **CT** ", Dennis L. Parker, Medical Physics 9(2) March/April 1982.
The present invention reduces skew...

14/3,K/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00436270
Helical scanning computed tomography
Rechnergesteuerte Tomographie mit schraubenformiger Abtastung
Tomographie par calculateur avec balayage helicoidal
PATENT ASSIGNEE:

GENERAL ELECTRIC COMPANY, (203903), 1 River Road, Schenectady, NY 12345, (US), (applicant designated states: DE;FR;GB;NL)
INVENTOR:
King, Kevin Franklin, 15651 West Ridge Road, New Berlin, Wisconsin 53151, (US)
Crawford, Carl Ross, 2557 North Lake Drive, Milwaukee, Wisconsin 53211, (US)
LEGAL REPRESENTATIVE:
Goode, Ian Roy et al (31098), London Patent Operation General Electric International, Inc., Essex House, 12-13 Essex Street, London WC2R 3AA, (GB)
PATENT (CC, No, Kind, Date): EP 428348 A2 910522 (Basic)
EP 428348 A3 920701
EP 428348 B1 970423
APPLICATION (CC, No, Date): EP 90312285 901109;
PRIORITY (CC, No, Date): US 435980 891113
DESIGNATED STATES: DE; FR; GB; NL
INTERNATIONAL PATENT CLASS (V7): G06T-011/00; A61B-006/03;
ABSTRACT WORD COUNT: 101

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPAB97	646
CLAIMS B	(German)	EPAB97	585
CLAIMS B	(French)	EPAB97	794
SPEC B	(English)	EPAB97	4919
Total word count - document A			0
Total word count - document B			6944
Total word count - documents A + B			6944

...SPECIFICATION data ordinarily requires that the half scan data set be weighted with a "half scan **weighting** " function so that the duplicative data does not make a disproportionate contribution to the final image when incorporated with the non-redundant data. The **weighting** and reconstruction of **images** from a half scan data set are discussed in detail in "Optimal Short Scan **Convolution** Reconstruction for Fanbeam **CT** ", Dennis L. Parker, Medical Physics 9(2) March/April 1982.
The source of the duplicative...

14/3,K/4 (Item 4 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00435948
Computerized tomographic image reconstruction method for helical scanning
Rechnergesteurtes tomographisches Bildrekonstruktionsverfahren fur Spiralabtasten
Methode de reconstruction d'image tomographique par calculateur pour balayage spiral
PATENT ASSIGNEE:
GENERAL ELECTRIC COMPANY, (203903), 1 River Road, Schenectady, NY 12345, (US), (Proprietor designated states: all)
INVENTOR:
King, Kevin Franklin, 15651 West Ridge Road, New Berlin, Wisconsin 53151, (US)
Crawford, Carl Ross, 2557 North Lake Drive, Milwaukee, Wisconsin 53211, (US)
Lonn, Albert Henry Roger, 2122 North 93rd Street, Waukesha, Wisconsin

53226, (US)
LEGAL REPRESENTATIVE:
Szary, Anne Catherine, Dr. et al (76781), London Patent Operation, GE International, Inc., Essex House, 12-13 Essex Street, London WC2R 3AA, (GB)
PATENT (CC, No, Kind, Date): EP 426464 A2 910508 (Basic)
EP 426464 A3 920429
EP 426464 B1 020306
APPLICATION (CC, No, Date): EP 90311954 901101;
PRIORITY (CC, No, Date): US 430372 891102
DESIGNATED STATES: DE; FR; GB; NL
INTERNATIONAL PATENT CLASS (V7): G06T-011/00
ABSTRACT WORD COUNT: 142
NOTE:
Figure number on first page: 003

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200210	789
CLAIMS B	(German)	200210	717
CLAIMS B	(French)	200210	861
SPEC B	(English)	200210	4637
Total word count - document A			0
Total word count - document B			7004
Total word count - documents A + B			7004

...SPECIFICATION redundant data requires that the half scan data set be weighted with a "half scan **weighting** " function so that the redundant data does not make a disproportionate contribution to the final image when incorporated with the non-redundant data. The **weighting** and reconstruction of **images** from a half scan data set are discussed in detail in "Optimal Short Scan **Convolution** Reconstruction for Fanbeam **CT** ", Dennis L. Parker, Medical Physics 9(2) March/April 1982.
The source of the redundant..

15/3,K/1 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00903315 **Image available**
METHOD AND SYSTEM FOR TAG DETECTION AND TRACKING IN MRI TAGGED IMAGES
PROCEDE ET SYSTEME PERMETTANT LA DETECTION ET LE SUIVI DE MARQUEURS DANS DES IMAGES A MARQUEURS IRM

Patent Applicant/Assignee:
KONINKLIJKE PHILIPS ELECTRONICS N V, Groenewoudseweg 1, NL-5621 BA Eindhoven, NL, NL (Residence), NL (Nationality)
Inventor(s):
ALLOUCHE Cyril , Prof. Holstlaan 6, NL-5656 AA Eindhoven, NL,
Legal Representative:
CHARPAIL Francois (agent), Internationaal Octrooibureau B.V., Prof. Holstlaan 6, NL-5656 AA Eindhoven, NL,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200237416 A2-A3 20020510 (WO 0237416)
Application: WO 2001EP12405 20011024 (PCT/WO EP0112405)
Priority Application: EP 2000403028 20001031
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
JP
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
Publication Language: English
Filing Language: English
Fulltext Word Count: 4413

Inventor(s):
ALLOUCHE Cyril ...
Fulltext Availability:
Detailed Description

Detailed Description
... is .

E(x)= lRiX[x,,x,+,] *e-(x / a)2
That is to say, the **convolution** of the step-function (Ri)i by the centered gaussian of standard 1 5 deviation...

```
File   9:Business & Industry(R) Jul/1994-2006/Oct 27
         (c) 2006  The Gale Group
File  15:ABI/Inform(R) 1971-2006/Oct 30
         (c) 2006 ProQuest Info&Learning
File  16:Gale Group PROMT(R) 1990-2006/Oct 27
         (c) 2006 The Gale Group
File  20:Dialog Global Reporter 1997-2006/Oct 30
         (c) 2006 Dialog
File  47:Gale Group Magazine DB(TM) 1959-2006/Oct 27
         (c) 2006 The Gale group
File  75:TGG Management Contents(R) 86-2006/Oct W4
         (c) 2006 The Gale Group
File  80:TGG Aerospace/Def.Mkts(R) 1982-2006/Oct 27
         (c) 2006 The Gale Group
File  88:Gale Group Business A.R.T.S. 1976-2006/Oct 27
         (c) 2006 The Gale Group
File  98:General Sci Abs 1984-2006/Oct
         (c) 2006 The HW Wilson Co.
File 112:UBM Industry News 1998-2004/Jan 27
         (c) 2004 United Business Media
File 160:Gale Group PROMT(R) 1972-1989
         (c) 1999 The Gale Group
File 275:Gale Group Computer DB(TM) 1983-2006/Oct 27
         (c) 2006 The Gale Group
File 264:DIALOG Defense Newsletters 1989-2006/Oct 27
         (c) 2006 Dialog
File 484:Periodical Abs Plustext 1986-2006/Oct W4
         (c) 2006 ProQuest
File 553:Wilson Bus. Abs. 1982-2006/Oct
         (c) 2006 The HW Wilson Co
File 570:Gale Group MARS(R) 1984-2006/Oct 27
         (c) 2006 The Gale Group
File 620:EIU:Viewswire 2006/Oct 29
         (c) 2006 Economist Intelligence Unit
File 621:Gale Group New Prod.Annou.(R) 1985-2006/Oct 27
         (c) 2006 The Gale Group
File 623:Business Week 1985-2006/Oct 27
         (c) 2006 The McGraw-Hill Companies Inc
File 624:McGraw-Hill Publications 1985-2006/Oct 30
         (c) 2006 McGraw-Hill Co. Inc
File 634:San Jose Mercury  Jun 1985-2006/Oct 27
         (c) 2006 San Jose Mercury News
File 635:Business Dateline(R) 1985-2006/Oct 28
         (c) 2006 ProQuest Info&Learning
File 636:Gale Group Newsletter DB(TM) 1987-2006/Oct 27
         (c) 2006 The Gale Group
File 647:CMP  Computer Fulltext 1988-2006/Dec W3
         (c) 2006 CMP Media, LLC
File 696:DIALOG Telecom. Newsletters 1995-2006/Oct 30
         (c) 2006 Dialog
File 674:Computer News Fulltext 1989-2006/Sep W1
         (c) 2006 IDG Communications
File 810:Business Wire 1986-1999/Feb 28
         (c) 1999 Business Wire
File 813:PR Newswire 1987-1999/Apr 30
         (c) 1999 PR Newswire Association Inc
File 587:Jane`s Defense&Aerospace 2006/Oct W3
         (c) 2006 Jane`s Information Group

Set     Items   Description
S1     252724   X()(RAY?? OR RADIATION OR RADIOAGRAPHY)
```

```
S2      435257   CT OR COMPUTED()(TOMOGRAPHY OR RADIOGRAPHY)
S3        4154   CONVOLUTION
S4    15343041   IMAG? OR FLUOROSCOPIC()IMAG? OR PIXEL? OR PEL OR POINT??
S5           0   AU=(ALLOUCHE, C? OR ALLOUCHE C?)
S6      729378   FILTER??? OR FOURIER(3N)TRANSFORM??
S7     1210914   NOISE?? OR INTERFERENCE?? OR GLARE?? OR GLARING OR PHANTOM-
                 ?? OR REMANENCE??
S8        8567   S1(3N)S2
S9           0   S8(3N)S3
S10          0   S8(20N)S3
S11          0   S8(40N)S3
S12          5   S8 AND S3
S13          5   RD  (unique items)
S14          2   S13 NOT PY>2002
S15          8   (S4(10N)(S6 OR S7))(3N)S8
S16          0   S15 AND S3
S17          5   S15 NOT PY>2002
S18          5   RD  (unique items)
```

14/3,K/1 (Item 1 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.

05230235 SUPPLIER NUMBER: 57153144
Low-energy X - ray studies.(CT Reconstruction by Using the MLS-ART Technique and the KCD Imaging System, part 1)
Guan, Huaiqun; Gaber, M. Waleed; DiBianca, Frank A.; Zhu, Yunping
IEEE Transactions on Medical Imaging, 18, 4, 355(4)
April, 1999
ISSN: 0278-0062 LANGUAGE: English RECORD TYPE: Abstract

Low-energy X - ray studies.(CT Reconstruction by Using the MLS-ART Technique and the KCD Imaging System, part 1)

...AUTHOR ABSTRACT: kinestatic charge detector (KCD) combined with the multilevel scheme algebraic reconstruction technique (MLS-ART) for **X - ray** computer tomography (**CT**) reconstruction. The KCD offers excellent detective quantum efficiency and contrast resolution. These characteristics are especially...

...used. In addition, the MLS-ART algorithm offers better contrast resolution than does the conventional **convolution** backprojection (CBP) technique when the number of projections is limited. Here we present images of...

14/3,K/2 (Item 1 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)

04153934 Supplier Number: 132318717 (USE FORMAT 7 FOR FULLTEXT)
Compute Intensive Applications Get a New Processing Engine with Motorola's First DataBoard.
PR Newswire, pNA
Oct 30, 2002
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 701

... portable libraries have been tuned to enable the HXEB100 to efficiently execute FFTs, filtering and **convolution** , and vector and matrix computations, which are the basis of imaging and sonar/radar applications. In a recent medical imaging **convolution** application, VSIPL combined with AltiVec will provide up to a 5x performance improvement over existing...

...is compatible with both 1U and 4U platforms so it will easily fit in most **CT** , **X - Ray** , radar, and embedded applications."
Standard Features on the HXEB100 include:

-- Dual or single MPC7455 microprocessor...

18/3,K/1 (Item 1 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.

05170100 SUPPLIER NUMBER: 55411953
Implementation of a combined X - ray CT **-scintillation camera** imaging **system for localizing and measuring radionuclide uptake: experiments in** phantoms **and patients.(computerized tomography)**
Tang, HR; Brown, JK; Da Silva, AJ; Matthay, KK; Price, DC; Huberty, JP; Hawkins, RA; Hasegawa, BH
IEEE Transactions on Nuclear Science, 46, 3, 551(7)
June, 1999
ISSN: 0018-9499 LANGUAGE: English RECORD TYPE: Abstract

Implementation of a combined X - ray CT **-scintillation camera** imaging **system for localizing and measuring radionuclide uptake: experiments in** phantoms **and patients.(computerized tomography)**

...AUTHOR ABSTRACT: 0 (+ or -) 0.4 mm. Preliminary patient scans suggest that the registration techniques developed for **phantom** studies can be used. Conversion of **X - ray CT image** data to attenuation maps was accomplished by the scaling of calibration data and includes extensions...

18/3,K/2 (Item 2 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.

04382424 SUPPLIER NUMBER: 19799027
Use of x-ray CT-defined regions of interest for the determination of SPECT recovery coefficients. (single photon emission computer tomography)
Tang, H.R.; Brown, J.K.; Hasegawa, B.H.
IEEE Transactions on Nuclear Science, v44, n4, p1594(6)
August, 1997
ISSN: 0018-9499 LANGUAGE: English RECORD TYPE: Abstract

...AUTHOR ABSTRACT: which determines activity concentrations for SPECT using regions of interest (ROI's) obtained from coregistered **X - ray CT images** . In this study, experimental **phantoms** containing cylindrical and spherical objects were **imaged** on a combined **X - ray CT** /SPECT system and reconstructed data volumes were registered using the known geometry of the system...

18/3,K/3 (Item 3 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.

04011020 SUPPLIER NUMBER: 18571630
Myocardial perfusion imaging with a correlated X-ray CT and SPECT system: an animal study.(Selected Papers from the 1995 Nuclear Science Symposium & Medical Imaging Conference (NSS/MIC))
Kalki, Kathrin; Brown, J. Keenan; Blankespoor, Stephen C.; Hasegawa, Bruce H.; Dae, Michael W.; Chin, Michael; Stillson, Carol A.
IEEE Transactions on Nuclear Science, v43, n3, p2000(8)
June, 1996
ISSN: 0018-9499 LANGUAGE: English RECORD TYPE: Abstract

...AUTHOR ABSTRACT: from the X-ray CT. Attenuation maps with lower spatial resolution and higher signal to **noise** ratio were also derived from the **X**

- **ray CT image** . The pixel values and intensity distribution in reconstructed myocardial SPECT image was not sensitive to...

18/3,K/4 (Item 1 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)

02376652
Silicon General - Marketing Procedures
Annual Report 1989 p. 0

...chip silicon or gallium arsenide integrated circuit.
Applications include magnetic resonance imaging (MRI), computerized tomography (**CT** scanners), digitally enhanced **X - ray imaging** , ultrasonic **imaging** , gas and liquid chromatography, **Fourier transform** spectroscopy, high speed digital oscilloscopes, and advanced audio such as that used to make digital...

18/3,K/5 (Item 1 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext

00634773 CMP ACCESSION NUMBER: EET19890911S2894
SBL finds interconnect faults
John Adams Chief Scientist Four Pi Systems Corp. San Diego
ELECTRONIC ENGINEERING TIMES, 1989, n 555, T8
PUBLICATION DATE: 890911
JOURNAL CODE: EET LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: SR
WORD COUNT: 1294

... doctors with X-ray cross-section images of patients, revolutionizing the medical diagnostic world. The **CT X - ray** slice **image** allows doctors to diagnose medical problems without the **noise** (the intervening material above or below the desired **image** slice) associated with conventional- transmission X-ray images.
CT gives the patient a lower X...